

WHAT IS CLAIMED IS:

1. A process for creating a lithophane-type work, comprising the steps of:
selecting a 2-D image;
5 converting the selected 2-D image into a 3-D representation thereof; and
extrapolating a thickness and depth of the 3-D representation based on opacity
and color of material into which the lithophane-type work will be produced.
2. The process of claim 1, wherein the selected 2-D image is a pictorial or
10 photographic work, the step of selecting including reading a binary representation of the
selected 2-D image.
3. The process of claim 2, wherein the binary representation of the selected 2-D
image is inputted into software executing on a central processing unit (CPU) for
15 converting the binary representation of the 2-D image into the 3-D representation.
4. The process of claim 3, wherein the inputting of the binary representation of the
selected 2-D image includes scanning the 2-D image or directly loading the 2-D image
into the software adapted to convert the inputted 2-D image into the 3-D representation.
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5. The process of claim 2, further comprising the step of adjusting a shape and
contrast of the selected 2-D to receive a desired shaped and to achieve a desired a desired
level of contrast between dark and light spots on a grayscale scale of the 2-D image.
- 25 6. The process of claim 3, further comprising the step of generating a final product
to be made from the material having the selected opacity and color and provided with a
surface to be sculpted to carry the lithophane-type work.
7. The process of claim 6, wherein the step of generating the final product includes
30 electronically creating an image representing the final product or retrieving the image
from database of the CPU.

8. The process of claim 6, further comprising the step of adjusting a size and shape of the final product and the 3-D representation relative to one another.

5 9. The process of claim 8, further comprising the step of actuating a 3-D printer adapted to sculpt the lithophane-type work on the surface of a tooling model identical to the final product and made from a casting material.

10 10. The process of claim 9, wherein the lithophane-type work is sculpted within the surface or erected upon the surface of the tooling model dependent upon opacity of the casting material.

15 11. The process of claim 8, further comprising creating a transportable electronic file containing a binary representation corresponding to the adjusted shape and size of the final product and the 3-D representation of the selected 2-D image.

12. A system for creating a lithophane-type work comprising:
a central processing unit (CPU), comprising:
software executing on the CPU for selecting a 2-D image,
20 software executing on the CPU for converting the selected 2-D image into a 3-D representation thereof; and
software executing on the CPU for extrapolating a thickness of the 3-D representation of the selected 2-D image based on opacity and color of material of a final product to be sculpted with the lithophane-type work.

25 13. The system of claim 12, further comprising software executing on the CPU for adjusting the selected 2-D image to apply a desired shape to the selected image and to achieve a desired level of contrast between dark and light spots on a grayscale scale of the 2-D image.

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14. The system of claim 13, further comprising software executing on the CPU for generating a final product to be made from material having opacity and color, the final product having a surface to be sculpted with the lithophane-type work.

5 15. The system of claim 13, further comprising software executing on the CPU for adjusting dimensions of the 3-D representation and the adjusted 2-D relative to one another.

10 16. The system of claim 14, further comprising a 3-D printer coupled to the CPU and operative to sculpt the lithophane-type work on the surface.

17. A article of manufacture comprising:
a surface; and
a lithophane-type work visible through the surface and having a thickness
15 adjusted as a function of opacity of material from which the surface is made and a color of the material.

20 18. The article of claim 17, wherein the lithophane-type work is sculpted within the surface.

19. The article of claim 17, wherein the lithophane-type work is erected on a top of the surface.

25 20. The article of claim 17, wherein the article is selected from the group consisting of cans, caps, key chains, eatable items and caps each having a polygonal or annular cross-section.